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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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23600	7590	02/25/2004	EXAMINER	
COUDERT BROTHERS LLP			ROY, SIKHA	
333 SOUTH HOPE STREET			ART UNIT	
23RD FLOOR			PAPER NUMBER	
LOS ANGELES, CA 90071			2879	

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/017,285

Applicant(s)

CLAUS ET AL.

Examiner

Sikha Roy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-15,20-24,27-29,31-44,49-53 and 56-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-15,20-24,27-29,31-44,49-53 and 56-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Amendment, filed on December 4, 2003 has been entered and is acknowledged by the Examiner.

Cancellation of claims 1,16-19,25,26,30,45-48,54 and 55 has been entered.

The amended drawing of Fig. 1 is approved by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2 - 4,6,7,20,21,31 - 34,36, 49 and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,468,168 to Balaschak et al.

Regarding claim 2 Balaschak et al. disclose (Fig. 14 column 7 lines 18-55, column 8 lines 23-29, column 10 lines 32-67, column 11 lines 14-25) a discharge lamp 112 comprising a base 138 of a vitreous material wherein the first lead 130 passes through the base wherein the base forms a first airtight seal around the first lead, wherein the second lead 134 passes through the base wherein the base forms airtight seal, a first electrode 140 attached to the first lead 130, second electrode 142 attached to the second lead 134, a bulb 114 filled with a gas and hermetically sealed (third airtight seal) around the outer periphery of the base. Balaschak notes that the lead

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members 130 and 134 coated with a mixture 54 of vitreous and metallic materials are placed in a mold cavity and particles of single vitreous material for the base are added to fill the space around the lead members, then suitable press, sintering and subsequent cooling of the vitreous body causes it to shrink about the coated lead members and form a good hermetic seal therewith.

Claim 31 essentially recites the same limitation as of claim 2 and hence is rejected for the same reason

Regarding claims 3 and 32 Balaschak discloses (column 5 lines 23-40) the base 38 is made of glass (fused silica).

Regarding claims 4 and 33 Balaschak discloses (column 8 lines 23,24) the bulb is made of glass.

Regarding claims 6 and 34 Balaschak discloses (column 5 lines 23-26) the thermal expansion coefficient of the base is same as that of the envelope. The materials having same coefficient of thermal expansion enable a high quality seal.

Regarding claims 7 and 36 Balaschak discloses (column 6 line 67, column 7 lines 1-5) that the thermal expansion coefficient of the base 38 is same as that of the first and second leads 30.

Referring to claim 20 it is clearly evident from Fig. 15 that the gap between the first and second electrodes is parallel to the first and second leads.

Referring to claim 21 Balaschak discloses in Fig. 14 that the gap between the first and second electrodes 140,142 is perpendicular to the first and second leads.

Claims 49 and 50 essentially recite the same limitations as of claims 20 and 21 respectively and hence are rejected for the same reasons.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,468,168 to Balaschak et al.

Regarding claim 5 Balaschak does not disclose the thermal expansion coefficient of the base to be greater than $1.0 \times 10^{-6}/K$.

Balaschak discloses the thermal coefficient of the base being approximately equal to that of the leads made of molybdenum. The thermal coefficient of expansion of molybdenum is known to be in the range of 4.2×10^{-6} to $5.0 \times 10^{-6}/K$ (U.S. Patent 4,972,988 to Ohdate). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to specify the thermal expansion coefficient of the base being same as that of the leads of the lamp of Balaschak to be greater than $1.0 \times 10^{-6}/K$.

Claim 35 essentially recites the same limitation as of claim 5 and hence is rejected for the same reason.

Claims 22, 23 and 51,52 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,468,168 to Balaschak et al.

Regarding claims 22 and 23 Balaschak discloses the claimed invention except for the length of the gap between the first and second electrodes being less than 80% (claim 22) and less than 75% (claim 23). It would have been obvious matter of design choice to specify the length of the gap between the electrodes since the applicant has not disclosed this specific gap length between the electrodes solves any stated problem or is for any particular reason and it appears that the invention would perform equally well with the discharge lamp of Balaschak.

Claims 51 and 52 essentially recite the same limitation as of claims 22 and 23 respectively and hence are rejected for the same reason.

Claims 9,10, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,468,168 to Balaschak et al. and further in view of JP 57143243 to Kumabe et al.

Regarding claim 9 Balaschak does not disclose the electrodes are made of tungsten.

Kumabe in analogous art of discharge lamps disclose electrodes made of tungsten.

The selection of known material for a known purpose is generally considered to be within the skill of the art. Therefore it would have been obvious to use tungsten for

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the electrodes as taught by Kumabe for the electrodes of the lamp of Balaschak because the selection of known material for a known purpose is within the skill of the art.

Claim 38 essentially recites the same limitation as of claim 9 and hence is rejected for the same reason.

Regarding claim 10 Balaschak does not disclose the step of attaching the first electrode to the first lead comprising spot welding the first electrode to the first lead.

Kumabe discloses (see Constitution) spot welding of the electrode and the lead is done for attaching the tungsten electrode with molybdenum lead-in foil. Kumabe further discloses that this method provides a long-life discharge lamp without producing cracks and hence the workability and reliability of lamps are improved.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to specify the spot welding of the first electrode with the first lead as disclosed by Kumabe for attachment step of making the lamp of Balaschak for providing a long-life discharge lamp without producing cracks and hence improving the workability and reliability of the lamp.

Claim 39 essentially recites the same limitation as of claim 10 and hence is rejected for the same reason.

Claim 11 –15 and 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,468,168 to Balaschak et al. and JP 57143243 to Kumabe et al. and further in view of JP 06223783 to Matsushita Denki Sangyo KK.

Regarding claim 11 Balaschak and Kumabe do not disclose the melting of the welding agent positioned between the first electrode and the first lead during spot welding.

JP 06223783 in relevant art of making discharge lamp discloses welding agent of platinum film melted on the junction between the electrode and the lead during welding. It is further noted that this is an easy and known method of attaching the electrode to the lead.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use welding agent (platinum) positioned between the first electrode and the first lead as disclosed by JP 06223783 during attachment step of lamp of Balaschak.

Claim 40 essentially recites the same limitation as of claim 11 and hence is rejected for the same reason.

Referring to claim 12 Balschak, Kumabe and JP 06223783 disclose the claimed invention except for the melting point of the weld agent being higher than the operating temperature of the lamp and lower than the melting points of first lead and the first electrode. The examiner notes that discharge lamp of Balaschak and Kumabe having the tungsten electrodes and molybdenum leads and using platinum as weld agent as taught by JP 06223783 intrinsically has the weld agent with melting point higher than the operating temperature of the lamp and the melting points of tungsten electrode and molybdenum leads.

Claim 41 essentially recites the same limitation as of claim 12 and hence is rejected for the same reason.

Regarding claims 13 and 42 Kumabe discloses the electrode made of tungsten and the lead is made of molybdenum.

Regarding claims 14 and 43 JP 06223783 discloses platinum used as welding agent.

Regarding claim 15 and 44 Balaschak, Kumabe and JP 06223783 do not disclose tantalum as weld agent. The selection of known material for a known purpose is generally considered to be within the skill of the art. Therefore it would have been obvious to use tantalum instead of platinum because the selection of known material for a known purpose is within the skill of the art.

Claims 8,27, 28, 37,56,57 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,468,168 to Balaschak et al. in view of U.S. Patent 6,140,769 to Bruggemann et al.

Referring to claim 8 Balaschak does not disclose the power of the discharge lamp being less than 50 watts.

Bruggemann in pertinent art of single ended incandescent lamp discloses (column 2 line 35) power of the lamp 25 W. Bruggemann further discloses that these lamps capable of dissipating powers up to 25watt with a compact construction are suitable for vehicle light such as stop light, tail light, indicator light.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to specify the single ended discharge lamp of Balaschak having power of less than 50watts as suggested by Bruggemann for suitable use in vehicle lights.

Claim 37 essentially recites the same limitation as of claim 8 and hence is rejected for same reason.

Regarding claims 27, 56 and 28, 57 Bruggemann discloses (column 4 lines 50-54) the lamp having xenon as filling gas to a pressure of 2-15 bar.

Claims 24 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,468,168 to Balaschak et al. in view of U.S. Patent 5,006,088 to Tokuhara et al.

Regarding claim 24 Balaschak does not disclose positioning a brace attached to the first lead between the first electrode and the base and attached to the second lead between the second electrode and the base.

Tokuhara in the relevant art of incandescent lamp discloses (Fig. 1 column 3 lines 10-15) a brace (vitreous bridge) 22 within the envelope rigidly interconnected to the leads. Tokuhara further discloses that the bridge retains the lead wires at a proper spacing from each other.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include a brace as disclosed by Tokuhara attached to the leads in between the electrodes and the base of the lamp of Balaschak for retaining the lead wires at a proper spacing from each other.

Claim 53 essentially recites the same limitation as of claim 24 and hence is rejected for the same reason.

Claims 29 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,468,168 to Balaschak et al. in view of JP 2000231906 to Yano.

Claim 29 differs from Balaschak in that Balaschak does not exemplify the closed end of the bulb is a lens.

Yano in same field of endeavor of discharge lamp discloses(Fig. 3) the light emitting part of the light transmitting bulb is formed in a convex lens shape. Yano further discloses that this lens shape of the bulb enhances the luminous intensity.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the end of the bulb of Balaschak a convex lens as taught by Yano for enhancing the luminous intensity.

Claim 58 essentially recites the same limitation as of claim 29 and hence is rejected for the same reason.

Response to Arguments

In response to applicants' argument that the base of the discharge lamp of Balaschak is not made of a single material, the examiner respectfully disagrees. The examiner notes that Balaschak discloses (column 7 lines 44-57 column 10 lines 35-67, column 11 lines 14-25) the base 138 (Fig. 14) is essentially made of single vitreous material having lead members 130 and 134 with coating 54 (Fig. 7, 7(a)).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Sikha Roy
Patent Examiner
Art Unit 2879


ASHOK PATEL
PRIMARY EXAMINER